



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

sprouts from an original tree, which was cut down probably twenty-five years ago. The three trunks are of about equal size—about twenty feet high—and branch within six feet of the ground. The bark is closer and darker colored than that of the white oak. The leaves in outline, but not in lobation, are much like those of the Saul's hybrid, being six or seven inches long, and narrow, with about four pairs of lobes; most of the sinuses reaching within half an inch or less of the midrib. The base of the leaf is generally obtuse and rounded, gradually widening for an inch or more to the first pair of lobes, which are scarcely more than coarse teeth. The remaining lobes are rather irregular, there being usually two or three pairs of large ones of about an inch in length each, then a pair of small short ones or teeth, ending in a narrow acutish point of about half an inch. The middle pair of lobes is the longest and broadest, making the greatest breadth of the leaf, which is about two inches. The under surface of the leaf is of a light gray, with a minute and sparse pubescence. The lobes generally point strongly forward, but frequently one or two diverge nearly at right angles. The upper surface is smooth, dark green, and the texture is considerably thicker and firmer than in *Q. alba*. The petiole is about an inch long, narrow, but less flexible than in No. 1, and destitute of the yellowish color. The acorns mature mostly in twos, and the common peduncle is about half an inch long, and thick. The acorns are about the size and form of those of *Q. alba*, the cup covering about one-third, with a thin edge, and with close smoothish scales. This tree seems to show a mixture of *Q. alba* and *Q. stellata*, with a preponderance of *Q. alba*.

Hybrid No. 3. (Plate xxx.)—This tree grows close by the roadside about two miles north of the city, near what is called Piney Branch. It is, perhaps, twenty-five feet in height, and the trunk a foot in diameter. The bark and general habit of the tree is much like that of *Q. stellata*, the bark being close and dark in color. The leaves, in length, are five or six inches, slightly shorter than in hybrids numbers one and two, and broader. There are about five pairs of lobes, of which the third and fourth are the largest and broadest. They are coarser and wider, and have greater divergence than in the others, and the central part of the leaf is broader. The lower surface is grayish, rougher and more pubescent than in number two. The upper surface is of a dark shining green. The leaf is firmer in texture than in either of the others; the petiole is stiffer; and in outline, rigidity and roughness it shows an evident approach toward *Q. stellata*. The same relationship is manifested in the acorns, which are broader and more depressed than those of *Q. alba*, evidently approaching those of *Q. stellata*, but much larger. In other respects it is *Q. alba*.

New or Little-Known Ferns of the United States. No. 13.

By D. C. EATON.

43. *Polypodium thysanolepis*, Al. Braun.—Rootstock creeping, densely scaly; stalks two to six inches long; fronds as long as the stalks, ovate in outline, sub-coriaceous, slightly scaly above, clothed

beneath with ovate reticulated ciliate scales, pinnatifid into rather few oblong or oblong-spatulate entire segments separated by broad rounded sinuses; veinlets anastomosing in a single series of large areoles, each areole enclosing a sorus, outer veinlets free.—Baker, Syn. Fil., ed. 2, p. 512.

Collected on the Huachuca Mts., Arizona, by Prof. and Mrs. Lemmon in August, 1882.

This is a well-known Mexican fern of the same group with *P. incanum*, from which it differs by its usually larger size, its fewer, broader and more distant segments, and especially by the heavier covering of larger, laxer and beautifully ciliated scales. It is No. 971 of Parry and Palmer's collection of 1878, from San Luis Potosi, and No. 210 of Ghiesbreght's Chiapas distribution.

44. *NOTHOLÆNA CALIFORNICA*, *n. sp.*—Rootstock short; stalks clustered, two to four inches long, black, wiry, when young scaly with lanceolate dark-brown rigid scales; frond one to two inches long, broadly deltoid-ovate or pentagonal-ovate, from a quadri-pinnatifid base gradually simpler to the apex; ultimate segments oblong or triangular-oblong, small (1-2 lines long) and very numerous and crowded; upper surface minutely glandular; lower surface copiously farinose with yellow or whitish powder, except on the strong blackened rachis and midribs; margins more or less recurved, but not covering the copious dark-brown sporangia.

San Diego Co., California, Miss Burbeck, Mr. Cleveland and Mr. Stout. Colorado desert, Dr. Parry. Arizona, Prof. Lemmon.

This plant I have for a long time confused with *N. candida*, Hook., as at pp. 22 and 23 of the second volume of Ferns of North America, where it is spoken of as the Californian form of that species. It has smaller and more compound fronds than *C. candida*, and occupies in the genus a position about midway between that species and *N. Chilensis*. The powder is so abundant that it is sometimes difficult to glue a specimen to paper.

45. *Notholæna Aschenborniana*, Klotzsch.—Rootstock short, creeping; stalks clustered, dark-chestnut, copiously beset at the base with rigid blackish ciliated lanceolate-acuminate scales, which become more delicate higher up the stalk, and pass into a dense whitish or pale-ferruginous tomentose mass which covers the frond; fronds 4-10 inches long, pinnate, the pinnæ an inch long or less, rarely more, pinnatifid into very numerous sessile, oblong, entire or crenately lobed obtuse segments, upper surface at length becoming smoothish, the lower indistinctly farinose beneath the heavy coating of ciliate cleft scales; sporangia forming a dark line around the edges of the segments.—Klotzsch, in *Linnæa*, xx., p. 417.

This was first gathered near Chepultepec, in Mexico, by Alwin Aschenborn. Fournier (Pl. Mex., Crypt., p. 124) gives among the localities "Texas, Trécul, No. 1,456, Drummond, No. 354." Dr. Edward Palmer found it in the mountains east of Saltillo, Nuevo Leon, Mexico, in 1880; and now it is found and identified by Mr. Davenport among some unnamed ferns sent by Prof. Lemmon from the Huachuca Mts. It has a decidedly less compound frond than *N. Newberryi*, and may be easily recognized by the beautifully

ciliated scales, soft and tomentose on the pinnules, but gradually more and more rigid towards the rootstock, where they are hard and nearly black.

46. *Pellaea marginata*, Baker.—Stalks tufted, slender, castaneous, shining; fronds four to six inches long and nearly as broad, deltoid in outline, tri-quadri-pinnatifid, segments linear-oblong, chartaceous; smooth; involucre broad, continuous, delicate, the margin slightly erose.—Syn. Fil., p. 151. *Cheilanthes marginata*, Hooker.

Huachuca Mts., Arizona, Prof. and Mrs. Lemmon, August, 1882. Common in Tropical America from Mexico and the West Indies to Peru. It is often difficult to distinguish between this and *P. angustifolia*, though the latter has commonly a less decomposed frond, and longer and more distant ultimate segments.

47. *Cheilanthes Alabamensis*, Kunze.—Huachuca Mts., Arizona. Prof. and Mrs. Lemmon, August, 1882. A more western station than any before reported.

48. *Cheilanthes lendigera*, Swartz.—Rootstock cord-like, creeping, covered with soft narrow scales; stalks rather distant, 4–8 inches long, at first loosely tomentose with ferruginous hairs, at length castaneous and nearly smooth; fronds as long as the stalks, ovate-oblong, thrice to four times pinnate, ultimate pinnules cuneate-obovate, less than a line long, the margin recurved and the white involucre leaving but a small opening in the middle, making the pinnules pouch-like; upper surface green and naked, the lower hairy.—Hooker, Sp. Fil., ii., p. 95, t. civ., B.

Huachuca Mts., Prof. and Mrs. Lemmon.

This is another well-known species of Mexico and the Andes of Colombia and Ecuador. It is much less woolly than *C. tomentosa*, and the pouch-like ultimate pinnules are very noticeable.

49. *Asplenium montanum*, Willd.—This must now be considered a New England fern. One day last April three students of the Academy at Norwich, Conn., started out for a day's search for "trailing-arbutus, lichens and rocks." Messrs. Fuller and Setchel found this fern in clefts of rocks on Lantern Hill, which rises between the towns of Ledyard and North Stonington. Mr. Fuller first saw the plant, Mr. Setchel identified it, and Mr. Collin has the honor of being one of the party.

About Christmas, 1882, Mr. C. B. Graves, of New London, also discovered the plant on the same mountain, and also on a smaller hill distant a little way to the north-east. Mr. Graves says it is not uncommon in holes and crevices of the rock. It is to be hoped that the difficulty of getting to the place will long prevent the extirpation of the fern.

50. *Asplenium monanthemum*, L., was found among Prof. Lemmon's Huachuca ferns by Mr. Davenport, who has sent me three fronds. They are all rather smaller than common Mexican specimens. One of them has uniformly monosorous pinnæ, one shows here and here a second sorus, and the third has regularly three or four sori on most of the pinnæ. Usually this fern has decidedly larger and more erect fronds than *A. Trichomanes*, and the few large sori are along the lower edge of the pinnule.

51. *Asplenium Glenniei*, Baker, described at p. 488 of the second edition of *Synopsis Filicum*, was scantily collected on the Huachuca Mts. by Prof. Lemmon. It is a small fern growing in little tufts like *A. montanum*; but the fronds are lanceolate, tapering both ways, 2-6 inches long, pinnate, with many pairs of oblong, toothed or pinnately lobed deep-green pinnæ. The sori are abundant, rather large, slightly curved outwards, and placed mostly very near the midrib of the pinnules. The fern comes near the old world *A. fontanum*, but is not closely allied to any of our common species. I am obliged to Mr. Baker for the identification.

52. *Aspidium juglandifolium*, Kunze.—The free-veined form which has been called *Phanerophlebia nobilis*, is in Prof. Lemmon's Huachuca collection. This was found in Western Texas many years ago, but has never been distributed to herbaria from any station within the borders of the United States. With this, Prof. Lemmon secured a few fronds of *Aspidium Filix-mas* and a few of an *Aspidium* with decompound fronds, the species not yet clearly recognized.

A List of Grasses collected by Mr. C. G. Pringle in Arizona and California, with descriptions of those species not already described in American publications.*

62. *Cottea† pappophoroides*, Kunth, Gram., i., 84.281. t. 52; Enum. Pl. i. 256; Steud, Syn. Pl., i. 201.

Perennial. Culms erect, branched at the base, 2 feet high, smooth below, pubescent above, especially at the joints and on the main axis and branches of the panicle. Leaves flat, 2-3 lines wide, 5-8 in. long, involute towards the tip; sheaths loose, pubescent like the leaves; ligule a ciliate ring of short hairs. Panicle lanceolate in outline, 6-8 in. long, the more or less spreading branches solitary, the lower ones about 2 in. long, branched a little below the middle, the branchlets 1-3-flowered. Spikelets about 4 lines long, exceeding their pedicels; outer glumes lanceolate, $2\frac{1}{2}$ lines long. Flowering-glume 2 lines long, striate with 9 prominent nerves and several intermediate less prominent ones, the two lateral divisions more deeply cut than the others and somewhat divergent; the three longest awns a little over a line in length. The edge of the flowering-glume, for a short distance above the base, is densely pilose with hairs a line long.

Near Tucson, Arizona, Dec. 7th.

This is the same as No. 2,057 of Wright's N. Mex. collection, 1851-2. Mr. Pringle found only a single specimen, which is an old one, but sufficiently perfect to show the above-enumerated charac-

* Continued from page 145, Vol. ix.

† COTTEA, Kunth.—Panicle open; spikelets 6-9-flowered, the upper imperfect. Outer glumes 2, membranaceous, concave, many-nerved, the lower one 3-lobed at the tip, lobes acute-mucronate, the upper one a little smaller, entire, acute. Flowering-glume 5-cleft, the lateral lobes deeper than the others, concave, sub-11-awned, awns continuous, straight, unequal, three longer than the others. Palea bicarinate, apex bifid, lobes acute-mucronate. Stamens three. Ovary smooth. Styles 2, terminal. Stigmas plumose. Grain oblong, nearly terete, smooth and freely enclosed within the palea.